LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A casting roll for the continuous casting of thin metallic strips, ~~in particular of steel strips,~~ in a ~~two-roll or one-roll~~ roll casting installation, the roll comprising ~~having~~ a roll core [[(1)]] with an outer lateral surface, ~~(4) and~~ an annular roll shell [[(2)]] which surrounds the roll core[[,]] and is shrunk on the roll core, the shell ~~and~~ has an inner lateral surface opposite the outer lateral surface of the core, the roll ~~(5) and~~ having a central casting-roll axis ~~(8),~~ ~~characterized in that at least one of~~ the lateral surfaces ~~(4, 5) which~~ lie opposite one another and form a shrink connection, at least one of the lateral surfaces has elevations and depressions in the at least one lateral surface, at least some of ~~which~~ the elevations and depressions are oriented in the direction of the casting-roll axis [[(8)]] and ~~the~~ have a radial extent ~~of which is~~ at least 2 μm.

2. (Currently Amended) The casting roll as claimed in Claim 1, ~~characterized in that~~ wherein the elevations and depressions form a surface structure on at least one of the lateral surfaces [[(4, 5)]] which lie opposite one another, and in ~~which~~ the surface structure the lateral surface has a roughness (R_Z) of between 2 μm and 1500 μm.

3. (Currently Amended) The casting roll as claimed in Claim 1, ~~characterized in that~~ wherein at least one of the lateral surfaces which lie opposite one another has a roughness (R_Z) of between 10 μm and 500 μm.

4. (Currently Amended) The casting roll as claimed in ~~one of the preceding claims, characterized in that~~ claim 1, wherein at least one of the lateral surfaces ~~(4, 5)~~ which lie opposite one another has the elevations and depressions in and directly around a casting-roll plane of symmetry which is normal to the axis[[,]] and is substantially along the entire circumference of one of the lateral surfaces ~~(4, 5)~~, with a radial extent of at least 2 μm, ~~which are preferably~~ and the elevations and depressions are oriented in the circumferential direction.

5. (Currently Amended) The casting roll as claimed in Claim 4, ~~characterized in that~~ wherein the elevations and depressions in and around ~~the~~ a casting-roll plane of symmetry which is normal to the axis, on at least one of the lateral surfaces ~~(4, 5)~~ which lie opposite one another, form a surface structure in which the lateral surface has a roughness (R_Z) of between 2 µm and 1500 µm.

6. (Currently Amended) The casting roll as claimed in ~~one of the preceding claims, characterized in that~~ claim 1, wherein the elevations and depressions form supporting surfaces [[(9)]] which are directed substantially radially and in the direction of the casting-roll axis [[(8)]] and have a longitudinal extent less than or equal to the lateral-surface length (L).

7. (Currently Amended) The casting roll as claimed in ~~one of the preceding claims, characterized in that the roll core (1) and the annular roll shell (2), in~~ claim 1, wherein in the region of the lateral surfaces [[(4, 5)]] which lie opposite one another, the roll core and the annular roll shell are formed from materials of different hardness, and at least the lateral surface of the core or the shell which has the higher lateral surface hardness is provided with the predetermined roughness (R_Z).

8. (Currently Amended) The casting roll as claimed in ~~one of the preceding claims, characterized in that~~ claim 1, wherein the roll core ~~(1) consists~~ is comprised of steel and the annular roll shell ~~(2) consists~~ is comprised of Cu or a Cu alloy.

9. (Currently Amended) The casting roll as claimed ~~in one of the preceding claims, characterized in that~~ claim 1, further comprising a joining layer ~~(10) is~~ arranged between the roll core [[(1)]] and the roll shell ~~(2), and in that the material which forms the joining layer (10) is deposited on one of the two mutually associated lateral surfaces (4, 5)~~.

10. (Currently Amended) The casting roll as claimed in Claim [[7]] 9, ~~characterized in that~~ wherein the one of the ~~mutually associated~~ lateral surfaces ~~(4 or 5) is provided with~~ has the

predetermined roughness (R_Z), and the material which forms the joining layer [[(10)]] is deposited on the other lateral surface.

11. (Currently Amended) The casting roll as claimed in ~~one of Claims 9 or 10, characterized in that~~ claim 10, wherein the joining layer [[(10)]] is ~~formed by~~ comprised of a metal or a metal alloy.

12. (Currently Amended) The casting roll as claimed in ~~one of Claims 9 to 11, characterized in that~~ claim 9, further comprising wear-resistant granules ~~are~~ embedded in the joining layer [[(10)]].

13. (Currently Amended) The casting roll as claimed in Claim 12, ~~characterized in that~~ wherein the wear-resistant granules ~~consist~~ are comprised of metal oxides~~, such as aluminium oxide, zirconium oxide or similar materials~~.

14. (Currently Amended) The casting roll as claimed in Claim 12, ~~characterized in that~~ wherein the wear-resistant granules are ~~formed by~~ comprised of carbide grains or platelets~~, such as titanium carbide, tungsten carbide, silicon carbide or similar materials~~.

15. (Currently Amended) The casting roll as claimed in Claim ~~13 or 14, characterized in that the grain size of~~ 12, wherein the wear-resistant granules ~~is~~ have a grain size less than 40 µm~~, preferably less than 10 µm~~.

16. (Currently Amended) The casting roll as claimed in ~~one of the preceding claims, characterized in that~~ claim 1, wherein the roll core[[,]] ~~parallel to the casting-roll axis (8),~~ has grooves [[(7)]] distributed over ~~its~~ the outer lateral surface and parallel to the casting-roll axis ~~(4), into which grooves~~ securing bars ~~(17) are~~ fitted[[,]] ~~which project~~ into the grooves, the bars projecting at least 2 µm above the lateral surface [[(4)]] of the roll core [[(1)]] in the radial direction.

17. (Currently Amended) The casting roll as claimed in Claim 16, ~~characterized in that~~ wherein the securing bars [[(17)]] project between 500 µm and 15 mm above the lateral surface [[(4)]] of the roll core [[(1)]] in the radial direction.

18. (Currently Amended) The casting roll as claimed in Claim 16 ~~or 17, characterized in that~~ wherein fewer than 16~~, preferably fewer than eight~~ of the securing bars [[(17)]] and grooves [[(7)]] are distributed over the roll core [[(1)]].

19. (Currently Amended) The casting roll as claimed in ~~one of Claims 16 to 18, characterized in that the length of~~ claim 16, wherein the grooves [[(7)]] and ~~of~~ the securing bars [[(17)]] have a length along the axis that is shorter than ~~the~~ a lateral-surface length [[(L)]] of the roll core [[(1)]].

20. (Currently Amended) The casting roll as claimed in ~~one of Claims 16 to 19, characterized in that~~ claim 16, wherein the inner lateral surface [[(5)]] of the roll shell [[(2)]] includes second grooves [[(18)]] which lie opposite the grooves [[(7)]] in the lateral surface [[(4)]] of the roll core [[(1)]], and respective grooves ~~(7, 18) which~~ in the opposite lateral surfaces lie opposite one another and the respective grooves opposite one another accommodate ~~in each case~~ one of the securing bars ~~bar (17)~~.

21. (Currently Amended) A process for producing a casting roll for the continuous casting of thin metallic strips, in ~~particular of steel strips,~~ using ~~the two-roll or one-roll~~ a roll casting process, ~~which~~ wherein the casting roll has a roll core [[(1)]] with an outer lateral surface [[(4),]] and an annular roll shell [[(2)]] which surrounds the roll core, is also but ~~has been shrunk on~~ and has an inner lateral surface [[(5)]] and the roll has a central casting-roll axis ~~(8), characterized~~
~~in that~~ , wherein the method comprises preparing at least one of the outer lateral ~~surface (4)~~ surface of the roll core [[(1)]] and the inner lateral surface [[(5)]] of the roll shell ~~(2) are prepared~~ for joining by shrink-fitting[[,]] by

~~in that~~ forming elevations ~~and~~ or depressions on at least one of the lateral surfaces and [[,]] at least some of ~~which~~ the elevations or depressions are oriented in the direction of the casting-roll axis [[(8)]] and ~~the~~ have a radial extent of ~~which is~~ at least 2 µm, ~~are produced on at least one of the mutually associated lateral surfaces (4, 5),~~

~~in that~~ then drawing the roll shell ~~(2) is drawn~~ onto the roll core so that the outer and inner lateral surfaces oppose each other, while holding the roll shell [[(1)]] at a temperature which is higher than ~~that~~ the temperature of the roll core [[(1)]].

22. (Currently Amended) The process as claimed in Claim 21, further comprising producing ~~characterized in that~~ the elevations ~~and~~ or depressions ~~which are produced~~ on the at least one of the ~~mutually associated~~ lateral surfaces ~~(4, 5) form~~ to define a surface structure in which the at least one lateral surface has a roughness (R_Z) of between 2 µm and 1500 µm.

23. (Currently Amended) The process as claimed in Claim 21 ~~or 22, characterized in that~~ further comprising, producing the elevations ~~and~~ or depressions ~~which are formed~~ on the at least one of the ~~mutually associated~~ lateral surfaces ~~(4, 5) form~~ to define a surface structure in which the at least one lateral surface has a roughness (R_Z) of between 10 µm and 500 µm.

24. (Currently Amended) The process as claimed in ~~one of Claims 21 to 23, characterized in that~~ claim 21, wherein the elevations ~~and~~ or depressions ~~which are formed~~ on the at least one of the ~~mutually associated~~ lateral surfaces ~~(4, 5)~~ are formed to have ~~produced with~~ supporting surfaces [[(9)]] which are directed substantially radially and have a longitudinal extent in the direction of the casting-roll axis ~~(8) and have a longitudinal extent~~ which is less than or equal to ~~the~~ a lateral-surface length [[(L)]] in the direction of the axis.

25. (Currently Amended) The process as claimed in ~~one of Claims 21 to 24, characterized in that~~ claim 21, further comprising producing the roll core [[(1)]] and the annular roll shell ~~(2) are produced~~ from respective materials of different hardness at least at the respective lateral surfaces, and forming the predetermined roughness (Rz) ~~the component which~~

~~is formed with~~ on the one of the roll core and the roll shell having the higher lateral-surface hardness ~~is provided with the predetermined roughness (R_z)~~.

26. (Currently Amended) The process as claimed in Claim 25, further comprising applying ~~characterized in that~~ the roughness ~~(R_z) is applied~~ by knurling, forging or milling the respective lateral surface.

27. (Currently Amended) The process as claimed in ~~one of Claims 21 to 26, characterized in that~~ claim 21, wherein the roll core at least at the outer lateral surface is of ~~(1) is produced from~~ steel and the annular roll shell ~~(2) is produced from~~ at least at the inner lateral surface is of Cu or a Cu alloy.

28. (Currently Amended) The process as claimed in ~~one of Claims 21 to 27, characterized in that~~ claim 21, further comprising depositing a joining layer ~~(10) is deposited~~ on one of the ~~mutually associated~~ opposing lateral surfaces [[(4, 5)]].

29. (Currently Amended) The process as claimed in ~~one of Claims 21 to 28, characterized in that a~~ claim 21, wherein the predetermined roughness (R_Z) is applied to one of the ~~mutually associated~~ lateral surfaces [[(4, 5)]], and further comprising depositing a joining layer ~~(10) is deposited~~ on the other lateral surface.

30. (Currently Amended) The process as claimed in ~~one of Claims 28 and 29, characterized in that~~ claim 28, wherein the joining layer [[(10)]] is ~~produced~~ deposited by electrodeposition.

31. (Currently Amended) The process as claimed in ~~one of Claims 28 and 29, characterized in that~~ claim 28, wherein the joining layer [[(10)]] is ~~formed~~ deposited by plasma deposition.

32. (Currently Amended) The process as claimed in ~~one of Claims 28 to 31, characterized in that~~ claim 28, wherein the joining layer [[(10)]] is ~~formed from~~ comprised of a metal or a metal alloy.

33. (Currently Amended) The process as claimed in ~~one of Claims 28 to 32, characterized in that~~ claim 28, further comprising incorporating wear-resistant granules ~~are incorporated~~ in the joining layer [[(10)]].

34. (Currently Amended) The process as claimed in Claim 33, further comprising ~~characterized in that~~ metal oxides[[,]] ~~such as aluminium oxide, zirconium oxide and similar materials, are~~ incorporated in the joining layer [[(10)]] as the wear-resistant granules.

35. (Currently Amended) The process as claimed in Claim 33, ~~characterized in that~~ further comprising carbide grains or carbide platelets~~, such as titanium carbide, tungsten carbide, silicon carbide or similar materials, are~~ incorporated in the joining layer [[(10)]] as the wear-resistant granules.

36. (Currently Amended) The process as claimed in ~~Claim 34 or 35, characterized in that~~ claim 33, wherein the wear-resistant granules ~~with~~ have a grain size of less than 40 µm~~, preferably less than 10 µm, are incorporated in the joining layer (10)~~.

37. (Currently Amended) A process for producing a casting roll for the continuous casting of thin metallic strips, in ~~particular of steel strips, using the two-roll or one-roll~~ a roll casting process, ~~which~~ wherein the casting roll has a roll core [[(1)]] with an outer lateral surface [[(4)]], and an annular roll shell [[(2)]] which surrounds the roll core[[,]] ~~has been shrunk on~~ and has an inner lateral surface [[(5)]] and the roll has a central casting-roll axis ~~(8), characterized in that~~, preparing at least one of the lateral ~~surface (4)~~ surfaces of the roll core [[(1)]] and ~~the inner lateral surface (5) of~~ the roll shell ~~(2) are prepared~~ for joining by shrink-fitting by [[,]]

~~- in that~~ forming grooves ~~(7) are formed~~ on the outer lateral surface [[(4)]] of the roll core [[(1)]] to extend parallel to the casting-roll axis ~~(8), into which grooves,~~ fitting securing bars ~~(17) are fitted which~~ into the grooves wherein the grooves and the bars therein are so sized and shaped that the bars project at least 2 µm, ~~preferably between 500 µm and 15 mm,~~ above the outer lateral surface [[(4)]] of the roll core [[(1)]] in the radial direction,
~~- in that~~ then drawing the roll shell ~~(2) is drawn~~ onto the roll core while holding the roll shell at a temperature which is higher than that of the roll core [[(1),]] for producing a shrink-fit connection ~~(3) being produced~~ between the securing bars [[(10)]] and the roll shell [[(1)]] , and producing at least one sealed join ~~being produced~~ between the roll core [[(1)]] and the roll shell [[(2)]].

38. (New) A process as claimed in claim 21, further comprising permitting the roll shell to cool after being drawn onto the roll core, so that the roll shell is shrink fit on the roll core.

39. (New) The process as claimed in claim 27, wherein the roughness is formed on the outer lateral surface.

40. (New) A process as claimed in claim 34, wherein the metal oxides comprise aluminum oxide or zirconium oxide.

41. (New) A process as claimed in claim 35, wherein the carbide comprises titanium carbide, tungsten carbide or silicon carbide.

42. (New) A process as claimed in claim 33, wherein the wear-resistant granules have a grain size of less than 10 µm.

43. (New) A process as claimed in claim 37, further comprising permitting the roll shell to cool after being drawn onto the roll core, so that the roll shell is shrink fit on the roll core.

44. (New) A process as claimed in claim 37, wherein the grooves and the bars therein are so sized and shaped that the bars project between 500 μm and 15 mm above the outer lateral surface.

45. (New) The casting roll as claimed in claim 9, wherein the joining layer is deposited on one of the two lateral surfaces.

46. (New) The casting roll as claimed in claim 9, wherein the joining layer is comprised of a metal or a metal alloy.

47. (New) The casting roll as claimed in claim 13, wherein the metal oxides comprise aluminum oxide or zirconium oxide.

48. (New) The casting roll as claimed in claim 14, wherein the carbide comprises titanium carbide, tungsten carbide or silicon carbide.

49. (New) The casting roll as claimed in claim 12, wherein the wear-resistant granules have a grain size less than 10 μm.

50. (New) The casting roll as claimed in claim 16, wherein fewer than eight of the securing bars and grooves are distributed over the roll core.